

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An integrated photovoltaic roofing system for attachment to a roofing surface, comprising:
 - at least one flexible membrane having a top surface and a bottom surface, the bottom surface for application to the roofing surface;
 - a plurality of elongated photovoltaic modules arranged side-by-side and attached to the top surface of the at least one flexible membrane to form an integrated unit for attachment to the roofing surface;
 - at least one conduit located at adjacent ends of the photovoltaic modules; and
 - a plurality of electrical leads in electrical connection with the photovoltaic modules and routed through the at least one conduit.
2. (Original) The system of claim 1 further comprising a plurality of connectors attached to the electrical leads for connecting at least of portion of the electrical leads together.
3. (Currently Amended) The system of claim 1 wherein each of at least a portion of the electrical leads have one end soldered to a photovoltaic module and another end attached to a connector.
4. (Original) The system of claim 3 further comprising at least one electrical lead with connectors attached to each end of the electrical lead for connecting to the at least a portion of the electrical leads.
5. (Original) The system of claim 1 wherein at least one hole for routing the electrical leads is defined in a bottom side of the at least one conduit.
6. (Currently Amended) The system of claim 1 wherein the at least one conduit is located above the photovoltaic modules.

7. (Original) The system of claim 1 wherein the at least one conduit comprises at least one support member.

8. (Currently Amended) The system of claim 1 wherein the photovoltaic modules are attached to the top surface of the at least one flexible membrane with an adhesive.

9. (Original) The system of claim 1 wherein at least one the flexible membrane comprises a single-ply membrane.

10. (Original) The system of claim 1 wherein the at least one flexible membrane is a thermoplastic membrane sheet, an elastomeric membrane sheet, or a reinforced bituminous membrane sheet.

11. (Currently Amended) The system of claim 1 wherein each photovoltaic module includes a plurality of solar cells.

12. (Currently Amended) The system of claim 1 wherein each photovoltaic module is flexible.

13. (Currently Amended) The system of claim 1 further comprising a seal along at least one edge between the at least one flexible membrane and at least one of the photovoltaic modules.

14. (Currently Amended) The system of claim 1 wherein the at least one flexible membrane and the photovoltaic modules attached to the at least one flexible membrane can be rolled upon themselves.

15. (Original) The system of claim 1 wherein the at least one flexible membrane comprises a single sheet.

16. (Currently Amended) The system of claim 1 wherein a first group of two or more photovoltaic modules is arranged side-by-side and a second group of two or more photovoltaic modules is arranged side-by-side, wherein the first and second groups are also arranged end-to end so that at least a portion of the electrical leads are located at adjacent ends of the photovoltaic modules of the first group and the second group.

17. (Currently Amended) An integrated photovoltaic roofing system for attachment to a roofing surface, comprising:

a flexible membrane having a top surface and a bottom surface, the bottom surface for application to the roofing surface;

a plurality of elongated photovoltaic modules arranged side-by-side and attached to the top surface of the at least one flexible membrane to form an integrated unit for attachment to the roofing surface, each of the photovoltaic modules comprising a plurality of solar cells and a pair of electrical leads, each of the electrical leads of the electrical lead pairs having one end connected to one of the photovoltaic modules and having a connector attached to a free end; and

at least one conduit located at adjacent ends of the photovoltaic modules, wherein a plurality of holes are defined in at least one side of the at least one conduit.

18. (Original) The system of claim 17 further comprising a plurality of electrical leads having connectors attached to each end, wherein the connectors on the electrical leads are adapted to connect to the connectors attached to the free ends of the electrical leads of the electrical lead pairs.

19. (Original) The system of claim 18 wherein inside the at least one conduit the connectors attached to the free ends of the electrical lead pairs are connected to the connectors on the electrical leads that have connectors attached to each end.

20. (Original) The system of claim 17 wherein the lead pairs are routed through the holes.

21. (Currently Amended) The system of claim 17 wherein each of the electrical lead ends connected to one of the modules are soldered to an electrical connector on a top surface of one of the photovoltaic modules.

22. (Currently Amended) The system of claim 17 wherein the at least one conduit is located above the photovoltaic modules and the at least one side of the at least one conduit is a bottom side.

23. (Currently Amended) An integrated photovoltaic roofing panel for attachment to a roofing surface, comprising:

Appln No. 10/679,814
Amdt date January 28, 2008
Reply to Office action of July 27, 2007

a flexible membrane having a top surface and a bottom surface, the bottom surface for application to the roofing surface;

a plurality of elongated photovoltaic modules arranged side-by-side and attached to the top surface of the at least one flexible membrane to form an integrated unit for attachment to the roofing surface;

a plurality of electrical leads located at adjacent ends of the photovoltaic modules, each of the electrical leads having one end in electrical connection with one of the photovoltaic modules and having a connector attached to a free end.

24. (Currently Amended) The system of claim 23 wherein each of the electrical lead ends connected to one of the photovoltaic modules are soldered to an electrical connector on a top surface of one of the photovoltaic modules.

Claims 25 - 31(Cancelled)